

# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA Division Director

August 14, 2013

Ronald Bosshardt Redmond Minerals, Inc. 475 West 910 South Heber City, Utah 84032

Subject: Review of Amended Notice of Intention to Commence Large Mining Operations, Redmond

Minerals Inc., Redmond Salt Mine, M/039/0002, Sanpete County, Utah

Dear Mr. Bosshardt:

The Division of Oil, Gas and Mining has completed a review of the Notice of Intention to Commence Large Mining Operations (Notice) for the Redmond Salt Mine, which was received July 18, 2013, with a supplementary map received on July 31, 2013. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please address only those items requested in the attached technical review by sending replacement pages of the original mining notice using redline and strikeout text. When the notice is determined technically complete, the Division will ask that you submit two clean copies of the complete and corrected plan. Upon final approval, both copies will be stamped approved, and one will be returned for your records.

Please submit your response to this review by October 7, 2013.

The Division will suspend further review of the Notice of Intention until your response to this letter is received. Please contact Peter Brinton at 801-538-5258 or me at 801-538-5261 if you have questions about the review. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker

Minerals Program Manager

PBB: pnb: eb Attachment: Review

cc: Mike Forbush, Redmond Minerals Inc. (mikef@redmondminerals.com)

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#### 1<sup>st</sup> COMPLETE REVIEW OF AMENDED NOTICEOF INTENTION TO COMMENCE LARGE MINING OPERATIONS

#### Redmond Minerals Inc. Redmond Minerals Mine

#### M/039/0002 August 14, 2013

#### **General Comments**

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
1	Page 24	The final version of the amended Notice will need to be signed (see page 24).	pnb	

## R647-4-105 - Operators, Surface & Mineral Owners

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
2	Page 2	Provide the names and titles of the corporate officers in an Attachment.	pnb	
3	Page 2, Section 2	Rusty Bastian is listed as the Registered Utah Agent in the Notice, while Jason Haddock is listed for the same position with the Division of Corporations. Please correct the inconsistency either on the Notice or with the Division of Corporations.	pnb	
4	Page 2, Section 2	Identify the principals of Redmond Minerals Inc. as listed with the Division of Corporations.	pnb	
5	Page 3, Section 5	Add the S1/2 of the NW1/4 of Section 13 to the legal description, which is where underground workings extend north of the Redmond property line.	pnb	
6	Page 3, Sections 6,7,9	As requested in the Division's previous map review (Comment 3), add surface, mineral, and adjacent surface property owners to the lists, consistent with the information provided on the Mine Location Map. The owner of the property east of the mine should be included; the current Notice says Tim Bastian is the owner.	pnb	7

#### R647-4-105 - Maps, Drawings & Photographs

**General Map Comments** 

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
7	All	The contour lines and numbers are difficult to read, partly because of what appears to be background ink scatter, and partly because of the lightness of the lines. Please make the topo lines and elevation text slightly darker (or somehow more visible). Perhaps the scatter results from not printing directly from the mapping software.		

#### 105.1 - Topographic base map, boundaries, pre-act disturbance

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
8	Map 1	The Mine Location Map should show the owners of all adjacent lands, such as to the east.	pnb	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
9	Site Facilities Map	Please provide a map with an aerial photo background, as was submitted previously.	pnb	
10	Site Facilities Map, etc.	As requested in the Division's previous map review (Comment 8), identify the mines and pits by common names (such as the Bosshart mine). Please more distinctly identify the pit boundaries, since it is very easy to overlook the light dotted lines.	pnb	
11	Site Facilities Map, etc.	Identify the current overburden piles with topsoil storage (per 106.5 and 106.6), including topsoil storage piles associated with future mining. Refer to comments for sections 106.5 & 106.6. If no topsoil has been separately stockpiled to this point, note the map accordingly.	pnb	
12	Site Facilities Map, etc.	Identify the boundaries of future overburden piles associated with future mining.	pnb	
13	Site Facilities Map, etc.	Unless they no longer exist, identify additional road segments on the map, as per Comment 14 in the previous review, and revise the reclamation treatments map and bond as needed. Examples observed in aerial photographs include: 1) roads in the area of Trash Pit #4, 2) roads near the retention ponds north of the clay mill, 3) a road north of the unnamed open pit salt mine near the subsidence areas, and 4) roads between the future clay mine and OW-12 northeast from the access road. Other examples may exist. Any onsite, pre-law roads not used for mining activities should be identified as such.	pnb	
14	Site Facilities Map, etc.	As discussed by email, include a note on the map that all of the white areas within the property boundary are disturbed. Please make the undisturbed areas more visible.	pnb	
15	Site Facilities Map, etc.	Identify what appears on 2011 aerial photos to be an equipment scrap/storage area directly south of OW-16 and west of the trash pit #3.	pnb	
16	Site Facilities Map, etc	Label the reclaimed trash pit just south of the county line and OW-17.	pnb	
17	Site Facilities Map, etc	Aerial photos suggest that the three clay pits at the far northwest end of the disturbance are really one clay pit. Correct as needed.	pnb	
18	Site Facilities Map, etc	Remove the reference to a Western Clay permit on the "Mining Highwall" northeast of the property boundary, since this highwall is apparently not part of a past Division permit.	pnb	
19	Site Facilities Map, etc	The highwall extending southwest from the unnamed clay pit (located northwest of the north mill by OW-10) appears to extend further than the dotted pit boundary suggests. Change accordingly.	pnb	
20	Site Facilities Map, etc	The northernmost depression identified as a clay pit (near the retention ponds and east of OW-05) appears to be a small retention pond, based on aerial photos. Label accordingly.	pnb	
21	Site Facilities Map, etc	Identify structures visible on aerial photos that are located adjacent to the underground salt mine entrance in the north end of the property, and just north of the clay mill.  Removal of permanent or temporary structures should be included in the reclamation cost.	pnb	
22	Site Facilities Map, etc	Add a note to the map to identify the farmers' fields to the east and west of the property boundary.	pnb	
23	Site Facilities Map, etc	Identify reclaimed areas on this map.	pnb	
24	Site Facilities Map, etc	Per Comment 22 of the previous review, identify locations of fuel and other storage tanks.	pnb	

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
25	Site Facilities Map, etc	Distinguish between salt and clay product piles. Salt product piles will be reclaimed differently than the clay product piles.	pnb	
26	Site Facilities Detail Map	Include a legend on the map.	pnb	
27	Site Facilities Detail Map	Not all of the buildings are labeled. Since the variance section references this map and the table, include in the table all of the structures from both the clay and the salt processing areas (for example, the warehouses and the clay tower structure) so it is clear which facilities will remain with a post-mining land use.	pnb	
28	Site Facilities Detail Map	Label storage tanks for brine, fuel, and other potentially deleterious substances.	pnb	

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
29	Page 4	Identify by name and number the other maps included with this Notice.	pnb	
30	Hydro Map, etc	Change the color or thickness of either the roads or drainage line types, since they can be confused when in close proximity. Also please lighten the salt structure lines.	pnb	
31	Hydro Map, etc	Include the line type for buried brine and drain pipes in the legend.	pnb	
32	Hydro Map, etc	Identify what has been described as a spring in the reclamation area above the salt water and runoff retention pond.	pnb	
33	Hydro Map, etc	Per comment 23 of the previous review, identify the pond located between OW-10 and OW-11, the retention pond in the drainage northwest of the unnamed northwest clay pit, the pond south of the storage buildings by the parking lot, the pond northeast of the mill below the two drainages near the property line, and any other ponds not already shown.	pnb	
34	Hydro Map, etc	To meet comment 25 of the previous review, generally identify the presence of irrigated fields to the east of the property boundary.	pnb	
35	Hydro Map, etc	Per comment 27 of the previous review, identify well-defined drainages visible on aerial photos (such as those without vegetation in the channels, to the north of the clay mill), and less visible drainage paths (such as a path to the northern retention ponds by the property boundary). Identify what appears to be a drain at the south end of the drainage pipe by the salt warehouse.	pnb	
36	Hydro Detail Map	Add a legend.	pnb	
37	Reclamation Treatments Map	Referencing the 1999 Treatments map, OW-03 (northeast of the north salt mine) appears to be post-law dumps or waste salt, and OW-10 and OW-11 appear to be pre-law dumps. Unless this is a mistake, correct the new map to show OW-3 as requiring reclamation.	pnb	
38	Reclamation Treatments Map	Many of the major grading slopes in clay pits and dumps are steeper than 2H:1V, based on the contour interval of 5 feet. Often, a slope ratio of 2H:1V is required for stable slopes. Correct the map and volumes as needed so that slopes will be stable and more easily revegetated.	pnb	
39	Reclamation Treatments Map	The grading volumes associated with future surface mining areas need to be calculated, and major reclamation contours need to be shown on this map.	pnb	
40	Reclamation Treatments Map	Please address comment 38 from the previous review: "Based on aerial photos, it appears that an overburden/waste dump is located at the intersection of K and D cross-sections. Correctly label and provide volumes as needed." Call if you have questions.	pnb	

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
41	Reclamation Treatments Map	It is assumed that the trash pits will need more than minor (6") grading. Identify major regrading contours and volumes for each of the trash pits as needed. The reclamation plan will need to be consistent with this map.	pnb	
42	Reclamation Treatments Map	Buried pipes will need to be capped on both ends or excavated, unless within mine workings. Identify which pipes will remain for a post-mining land use, and which will be removed. A text explanation is appropriate.	pnb	
43	Reclamation Treatments Map	Change the label in the legend for the blue graded areas from "Reclaimed & Released" to either "Regraded" or "Recontoured", since the Division has not fully released post-law reclaimed areas. If seeded, "Recontoured & Seeded" is appropriate for these areas.	pnb	
44	Reclamation Treatments Map	Please address comment 40 from the previous review: "Ensure that the hatching for "Raised berm for drainage containment" is clearly visible on the next copies of the map. It appears that this berm is to be reclaimed at the end of the mine life. The Notice text should discuss berms for drainage control (including reclamation), and maps should be consistent with the text. (105.3.17)"	pnb	
45	Revegetation Treatment Map	In the map legend, explain each of the revegetation treatment types (topsoil amount, seeding, type of surface roughening, addition of composted manure, flooding, clay/salt areas).	pnb	
46	Revegetation Treatment Map	The 1999 Reclamation Treatments map identifies a waste salt pile in the vicinity of the north salt pit. Is OW-03 or are there other features that are waste salt piles? Based on the 1999 Notice, any areas of waste salt storage will need to be identified as Type B revegetation treatment.	pnb	
47	Revegetation Treatment Map	The new Notice text and the new revegetation map currently do not clearly and specifically identify past revegetation variances. If there are variances in the 1999 Notice that are to continue, like the variance from 30% revegetation cover for specified areas of clay pits, dumps, and unmined clay hills, they need to be referred to in the text, such as on pages 28 and 29.	pnb	
48	Revegetation Treatment Map	In the legend, the "Previously Reclaimed" category should report a specific revegetation treatment type, and that you are waiting for vegetation to grow.	pnb	
49	Cross Sections	The proposed reclamation slopes of many of the clay mines and dumps are steeper than 2H:1V, and they may not be stable. The Reclamation Treatments map needs to be corrected, and the cross-sections will change accordingly.	pnb	
50	Underground	The subsided area currently used for waste salt disposal is not identified as a subsidence feature as it is on other maps. Identify this pit as a subsidence feature as well.	pnb	

## R647-4-106 - Operation Plan

**General Operation Comments** 

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
51		The Division recommends mentioning in the text the off-site sand and gravel operation and showing this on the Off-Site Features map.	pnb	

106.2 - Type of operations conducted, mining method, processing etc.

Type of operations conducted, mining method, processing ever							
Comment	Sheet/Page/	Comments	Initials	Review			
#	Man/Table #	Comments	Militari	Action			

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
52	Page 6, para 2	Identify the nature of the trash disposed in each of the pits. Depending on the nature of trash, you may need approval from the Department of Environmental Quality (DEQ) for continued disposal. Contact DEQ for more information.	pnb	
53	Page 6, para 2	The Division recommends that the discussion of procedures related to public safety, such as the use of signs and entry restrictions, be moved to 109.4.	pnb	
54	Page 6, para 2	The Division recommends moving the discussion of reclamation of underground openings (portals) to the reclamation plan in 110.2.	pnb	

106.3 - Estimated acreages disturbed, reclaimed, annually

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
55		Add the date as of which these acreages are accurate. Clarify the text to indicate that no acres have been fully released (since regraded acres still need to be vegetated).	pnb	
56	Page 9, para 5	Report the number of acres to be disturbed and reclaimed annually.	pnb	

106.4 - Nature of materials mined, waste and estimated tonnages

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
57	Page 10	Identify the estimated annual volume of reject materials produced.	pnb	
58	Page 10, para 3	Identify the estimated production for both salt and clay ore. The type of ore for which production is reported is not identified.	pnb	
59	Page 10, para 4	Discuss the nature of the overburden in this section (106.4). Explain why some overburden might not be suitable as topsoil, as stated in Section 106.9 (page 14, para 3).	pnb	
60	Page 10, para 5	Identify the mined salt as deleterious due to its toxicity to plants.	pnb	

106.5 - Existing soil types, location, amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
61	Page 10, para 6	Is the soil stored separately from the overburden such that soil can be selectively used to re-topsoil graded areas? Is it anticipated that overburden will be re-deposited as a suitable soil substitute? Please comment.	pnb	
62	Page 10, para 6	Provide an estimated amount of stockpiled material that is suitable for soil material/growth medium. Distinguish between topsoil and overburden.	pnb	
63	Attachment 1	The mapped boundary of the NCRS soil survey report doesn't cover the entire permitted area. Please re-run the report with an accurate boundary.	pnb	

106.6 - Plan for protecting & re-depositing soils

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
64	Page 10, para 7	The discussion of fill material should be moved to another location (such as 106.4 or 110.2). If natural or amended fill material is considered suitable for soil, this should be stated.	pnb	
65	Page 10, para 7	Provide an estimated range of the in-situ topsoil depths in areas of future mining, and an estimate of the minimum volume of in-situ, suitable soil material to be removed.	pnb	

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
66		If the area of topsoil piles shown on the site facilities map exceeds five acres, the text here will need to change, since a commitment is made to keep topsoil areas under five acres.	pnb	

106.7 - Existing vegetation - species and amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
67		Report the target revegetation density included in the current Notice. Report the results of the 1998 vegetation study, including the amount of native vegetation present in unmined areas.	pnb	

## 106.8 - Depth to groundwater, extent of overburden, geology

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
68		Discuss additional groundwater depth information available from the wells identified on the Off-Site Features map (HD-03). Refer to this map in the text. Is the well water alluvial or bedrock groundwater? This information is pertinent to the impacts section.	pnb	
69	Page 12, para 1	Given the inflow of the reported alluvial groundwater into workings near the salt mill, discuss alluvial groundwater in the area of the mine based on studies done to date, including its origin, general flow direction, estimated locations (flowpaths), depth, and nature (relative quality). As meaningful, reference the Whetstone report.	pnb	

106.9 - Location & size of ore & waste stockpiles, tailings & treatment ponds, and discharges

Comment #	Sheet/Page/ Map/Table #	Comments	Initial s	Review Action
70	Page 13, para 3	Clarify the meaning of "rejected material". Is it material rejected from processing or mining, or both?	pnb	
71	Page 13, para 4-5	The maps identify off-site and on-site drainages and retention ponds. Replace the statement "The mine does not cut-off any natural drainages" with a discussion of water diversion and retention ponds. Discuss in the text the sources of water both retained in ponds and diverted. Include a discussion of the function and locations of elevated roads and roadside ditches (such as on the east property line) in controlling drainage. Report the general direction of surface water flow in this area. Identify water storage pond sizes (depths and capacities).	pnb	
72	Page 13, Omission	Discuss the retention pond located south of the facilities, which is understood to be used to retain salty water from the French drain. Water in the pond appeared to be high in nutrients, based on the algae growth. Discuss possible sources (including off-site irrigation) and quality of the water. Discussion should be consistent with maps. Water from this pond may not be discharged without a UPDES permit.	pnb	
73	Page 13, para 6	Most of paragraph 6 does not address the requirements of 106.9, and is duplicated from 106.2. The discussion of scrap metal and trash pits should remain, but the rest of the paragraph should be removed. The context of the last sentence is unclear.	pnb	
74	Pages 13-14, para's 7&1	This paragraph should be removed, since it is does not address 106.9, and since it is duplicated in section 109.4.	pnb	
75	Page 14, para 2	Either reference this paragraph in—or move this paragraph to—section 109, since it discusses mitigation of potential impacts to water.	pnb	

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Comment #	Sheet/Page/ Map/Table #	Comments	Initial s	Review Action
76	Page 14, para 3	This paragraph should be removed, since the same information about soils and overburden is reported earlier in 106.9 and in 106.6.	pnb	

## R647-4-108 - Hole Plugging Requirements

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
77		Rule R647-4-108 only refers to drillholes. Proposed closure methods for "All exploratory holes" and "Larger exploratory holes" constitute a variance request if referring to drillholes, since exploratory drill holes must be plugged with concrete from the surface to five feet below the surface. Commit to comply with R647-4-108. Variance requests should be included in Section 112. Remove any text not related to drillholes.	pnb	

# R647-4-109 - Impact Assessment

#### **General Comments**

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
78	Page 14-15	Since cultural resources must be kept confidential, remove any detailed discussion of cultural resources. A single statement referencing the cultural resource report is appropriate. The Division will keep the report confidential.	pnb	
79		Refer to the reclamation plan when reclamation will mitigate a potential post-mining impact, like closing a portal or building highwall berms to protect public safety.	pnb	

# 109.1 - Impacts to surface & groundwater systems

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
80	para 2	The depths of groundwater alone do not guarantee that groundwater will not be impacted. The second sentence will need to be modified, and other justification provided for a conclusion about impacts. The first sentence repeats information from later in the paragraph that can be removed or modified.	pnb	

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
81	Page 15, para 2	It appears that the quality of the alluvial groundwater is being impacted by mining activities, at least in the area of the Bosshardt mine (near the salt processing facilities). Based on the Whetstone report, alluvial groundwater removed from the French drain is 3% NaCl (brackish), which is similar in salinity to ocean water (~3.5% salinity). Groundwater flowing through the French drain and ponded mine water (brine), and across the diapir salt to the alluvial or sedimentary deposits east of the mine (as concluded in the Whetstone report) is likely to be significantly more saline. (Water in underground workings is reported to be 25% NaCl).	pnb	
		<ul> <li>Groundwater impacts associated with increased salinity.</li> <li>The impact potential on down-gradient water resources, considering the available information on groundwater. Evaluate information from water wells.</li> <li>The likelihood and past occurrences of impacts from salty water on adjacent farm lands during mining and after mine reclamation.</li> <li>Any past, ongoing, and proposed mitigation efforts to avoid or minimize impacts, such as alluvial water diversion and the pumping of brackish water from the French drain (include current and future flow rates and frequencies).</li> <li>Reclamation activities related to mitigating long-term impacts. What actions are planned so that any need for pumping after reclamation is avoided?</li> </ul>		
82	Page 15, para 2	Discuss any impacts and mitigation associated with what appears to be surface runoff that leaves the property to the east from the facilities areas.	pnb	
83	Attachme nts	Provide and reference the Whetstone Associates report as an attachment to the Notice.  Please provide the Division with other information or studies, such as the Agapito & Associates report, and others that may have been performed as a result of the recommendations by Whetstone Associates.		
84	Page 15, para 2	Discuss any impacts of pits, dumps, and water management structures to surface water drainage. Reference reclamation and regrading measures used to mitigate any impacts.		
85	Page 15, para 2	It appears from the Reclamation Treatment map that a raised berm is proposed to help control surface drainage after mining. If so, discuss its mitigating purpose here.		
86	Page 15, para 2	Please move the information related to surface and ground water from the slope stability discussion (page 15, para 5) to section 109.1, and check for consistency.	pnb	

109.3 - Impacts on existing soils resources

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
87	Page 15, para 4	State whether soil has been saved in the past, and commit that it will be saved in the future.	pnb	
88	Page 15, para 4	Refer to the reclamation plan for flooding of soils beneath the salt waste piles to avoid unnaturally deleterious conditions.	pnb	

109.4 - Slope stability, erosion control, air quality, safety

Comment Sheet/Pa	Comments	Initials	Review
# Map/Tabl	# Comments	IIIIIais	Action

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Comment #	Sheet/Page/ Map/Table #	Comments			
89	Page 15- 16	Discuss the incidences of subsidence and identify mitigation measures to reduce the likelihood of future subsidence. Is pumping brine water for road salt processing from a sump in the salt mine expected to cause subsidence? What final reclamation measures are planned to prevent post-mining impacts? Will any permanent water diversion be necessary to prevent alluvial water from entering underground workings after dry stream channel restoration? Reference the Whetstone and other reports as needed.	pnb		
90	Page 16, para 5	Refer to the reclamation plan for closure of the portals to protect public safety.	pnb		
91	Page 16, para 6	It is unlikely that emissions are fully prevented from the clay processing area.	pnb		

109.5 - Actions to mitigate any impacts

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
92		Remove the references to cultural resources, as this information must be kept confidential.	pnb	

# R647-4-110 - Reclamation Plan

110.2 - Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
94	Page 17, para 4	This statement was omitted from new Notice: "Revegetation of clay features is not proposed." Since more information is needed in the variance section (112) to clarify which past variances will be retained, check whether this statement should be removed.	pnb	
95	Page 17, para 4	Identify whether the pre-1975 salt mine highwalls will be reclaimed. If the approved variance from 1999 is being retained, refer to it here. Check maps for consistency.	pnb	
96	Page 17, Discuss reclamation plans for stockpiled material, such as is done on page 24 of the para 4 current (1999) Notice, consistent with the Reclamation Treatments map.		pnb	
97	Page 17, Discuss reclamation plans for grading waste dumps to stable slopes, consistent with the Omission Reclamation Treatments map. No variance from the slope stability requirement has been approved for clay mines and dumps.		pnb	
98	Page 18, para 1	Reclamation of the retention ponds shown on the maps has been omitted from the discussion. Discuss reclamation plans for retention ponds and structures (see pages 27-28 of the 1999 Notice).		
99	Page 18, para 1	Discuss any plans to restore general drainage paths that have been cut off. State whether water is expected to pond in pits or other areas after reclamation.	pnb	
100	Page 18, para 2	Remove the statement that no vertical mine shafts are present in the mine. Discuss plans to reclaim underground ventilation shafts.	pnb	
101	Page 18, Omission	Discuss reclamation plans for trash pits, consistent with the Reclamation Treatments map.	pnb	
102	Page 18, Omission	Discuss reclamation plans for the French drain, sump culvert, and associated storage tanks. What reclamation actions will be taken to mitigate the post-mining impact to alluvial groundwater? Plans should be consistent with the discussion required in 110.2.	pnb	

# 110.3 - Description of facilities to be left (post mining use)

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
103		Buried pipes will need to be capped on both ends or excavated unless they are within mine workings. Identify which pipes will remain for the post-mining land use, and which will be removed. A text explanation is appropriate.	pnb	

110.4 - Description or treatment/disposition of deleterious or acid forming material

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
104		Correct the paragraph to acknowledge that salt is toxic to plants. Identify why the disposal of waste salt in pits is an appropriate disposal location and method.	pnb	
105		Refer to the planned flooding of soils beneath the salt waste piles to avoid unnaturally deleterious conditions in soils where waste salt has been stored.	pnb	

110.5 - Revegetation planting program

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
106	Page 19, para 6	Specify the application rate of manure for each of the revegetation treatment types, and seeding methods (such as is discussed in the 1999 Notice).	pnb	
107	Page 19, para 6	Briefly discuss the reasoning behind the revegetation treatment type designations, and refer to any revegetation variances listed in 112. Refer to any variances for revegetation from the 1999 Notice (pages 28 and 29) that you wish to continue. Your new text and the revegetation map currently do not specifically identify past revegetation variances.	pnb	
108	Page 19, para 6	Areas planned for flooding may be different than the 1999 areas to be flooded. In 1999, the areas beneath salt waste piles SW-1 through SW-4 were identified for flooding.	pnb	
109	Page 19, para 6	Briefly discuss methods for flooding of soils beneath the salt waste piles, consistent with the 1999 Notice. Contact the Division with questions.	pnb	

R647-4-112 - Variance

Comment #	t Sheet/Page/ Map/Table #	Comments		Review Action			
110	Page 19	19 Identify the following for each type of variance request:					
		1) The rule for which a variance is proposed,					
		<ol> <li>A description of the variance requested and the area affected (consistent with the Reclamation Treatments map and reclamation plan),</li> </ol>					
		<ol> <li>Justification for the variance (such as being approved previously in the approved 1999 Notice)</li> </ol>					
		4) Alternate methods or measures to be utilized.					
		See pages 28 and 29 of the 1999 Notice, which documents past variances. Continued variances listed should be consistent with: 1) the maps, and 2) the 1999 Notice.					

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
111	Omission	Please provide revised calculations using the Division's forms. Contact the Division for more information. Volumes used in cost calculations will need to be consistent with volumes reported on maps. Other cost information will need to be added, such as for future mine reclamation grading, pipe closure/removal, vent shaft plugging, and the construction of the raised berm for drainage containment.	pnb	